

**REMARKS**

Claims 19-22 and 28-46 were pending in the above-identified patent application. Claims 29 and 30 have been cancelled, without prejudice, claims 28-46 have been amended and new claim 47 has been added. Therefore, after the amendments presented herein have been entered, claims 19-22, 28 and 31-47 will remain pending.

Support for the amendments to the claims and for new claim 47 may be found throughout the specification and the claims as originally filed.

No new matter has been added. Any amendments to and/or cancellation of the claims should in no way be construed as an acquiescence to any of the Examiner's rejections and was done solely to more particularly point out and distinctly claim the subject matter of the invention and to expedite the prosecution of the application. Applicants reserve the right to pursue claims as originally filed in this or a separate application(s).

***Acknowledgement of the Examiner's Withdrawal of Certain Rejections and the Indication of Certain Claims as Allowable***

Applicants gratefully acknowledge the Examiner's withdrawal of the rejection of claims 19-21 under 35 U.S.C. § 102 over Adams *et al.* and the Examiner's indication of claim 22 as allowable.

***Request for Reconsideration of the Finality of the Action***

Applicants respectfully request reconsideration of the finality of the present Office Action. The final rejection was improperly issued because it raised new grounds of rejection, *i.e.*, the rejection of claims 19, 28, and 30 under 35 U.S.C. §102(b) over Cole *et al.* This rejection was not necessitated by Applicants' amendments to the claims or information submitted in an information disclosure statement filed during the period set forth in 37 C.F.R. §1.97(c). (See M.P.E.P. §706.07(a)). The claims that are now being rejected were pending in the same form when the Examiner issued the first Office Action. Applicants have been deprived of an opportunity to respond to the new grounds of rejection or to develop clear issues before the

advisability of an appeal. Accordingly, Applicants respectfully request that the finality of the present Office Action be reconsidered and withdrawn.

***Rejection of Claims 28-46 Under 35 U.S.C. § 112, Second Paragraph***

The Examiner has rejected claims 28-46 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Examiner asserts that claims 28-46 are indefinite because they are dependent from canceled claim 1.

Applicants respectfully submit that in view of the amendments to claims 28-46, the foregoing rejection has been rendered moot. Specifically, claims 28 and 31-46 have been amended to depend from claim 28 and claims 29 and 30 have been canceled. Accordingly, the Examiner is respectfully requested to reconsider and withdraw this section 112, second paragraph rejection.

***Rejection of Claims 19-21 and 29 Under 35 U.S.C. §102(b)***

The Examiner has rejected claims 19-21 under 35 U.S.C. § 102(b) as anticipated by Rothe *et al.* (WO 99/01541, January 14, 1999). The Examiner relies on Rothe *et al.* for disclosing “an IKK-alpha protein, which has 100% sequence identity to SEQ ID NO: 2 (see sequence alignment result Cao et al., A\_Geneseq\_101002 database, Accession NO: AAW96182, April 27, 1999).” In particular, the Examiner is of the opinion that

[t]his reads on claims 19, 20, and 21, which has an isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 19, wherein said peptide is less than one-hundred amino acids in length (claim 19); on claim 29, which has an isolated polypeptide comprising the amino acid sequence of SEQ ID NO: 2. See the sequence alignment attached to the Cao et al. reference. As to claims 20 and 21, the Rothe et al reference discloses a composition comprising the IKK-alpha polypeptide (page 3, line 1) that would have been the composition that contains the peptide of claim 19. Applicants’ arguments have been considered but found unpersuasive because the peptide of Cao et

al. reference has nine amino acid residues, which is less than one-hundred amino acid residues (see sequence alignment result of AAW96182), thus anticipating claims 19-21, 29.

Applicants respectfully traverse the aforementioned rejection for at least the following reasons. For a prior art reference, in terms of 35. U.S.C. § 102, to anticipate a claimed invention, the prior art must teach *each and every element* of the claimed invention. Lewmar Marine v. Barient, 827 F.2d. 744, 3 USPQ2d 1766 (Fed. Cir. 1987).

Claim 19, and claims depending therefrom, are directed to an isolated peptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17, 18 and 19, *wherein said peptide is less than one-hundred amino acids in length*.

To begin with, Rothe *et al.* disclose IKK- $\alpha$  polypeptides which are **756 amino acids** (SEQ ID NO:2) and **745 amino acids** (SEQ ID NO:4) in length. The Examiner appears to be relying on the “Cao *et al.* sequence alignment” and takes the position that “the peptide of [the] Cao *et al.* reference has nine amino acid residues, which is less than one-hundred amino acid residues.” However, the Examiner has failed to realize that there is no such thing as “the peptide of the Cao *et al.* reference” (*i.e.*, the art does not teach a peptide which is nine amino acid residues in length). The nine amino acid sequence segment appearing in the Cao *et al.* sequence alignment is generated by the local alignment computer software and represents the segment of the IKK- $\alpha$  polypeptides of Rothe *et al.* that have a local similarity with the polypeptide of SEQ ID NO:2. The nine amino acid sequence segment appearing in the Cao *et al.* sequence alignment is not disclosed in the Rothe *et al.* specification. As indicated above, the amino acid sequences that are disclosed in Rothe *et al.* are sequences that are longer than one hundred amino acids in length. Indeed, the sequence alignment result for AAW96182 provided by the Examiner states that “[t]he present sequence is not given in the present specification but is derived from the sequence given in AAW96157 as specified.” (*Emphasis added*). Thus, Rothe *et al.* do not teach or suggest each and every element of the claimed invention. Accordingly,

Applicants respectfully request that this 35 U.S.C. §102(b) rejection be reconsidered and withdrawn.

***Rejection of Claims 19, 28 and 30 Under 35 U.S.C. §102(b)***

The Examiner has also rejected claims 19, 28, and 30 under 35 U.S.C. §102(b) as anticipated by Cole *et al.* ("Deciphering the biology of *Mycobacterium tuberculosis* from the complete genome sequence," *Nature*, vol. 393, pp 537-544, June 11, 1998). Specifically, the Examiner is of the opinion that

Cole et al. teach an uracil-DNA glycosylase protein, Rv2975c from *Mycobacterium tuberculosis*, H37Rv strain (see abstract, Fig 5, Table 1), which has 100% sequence identity to SEQ ID NO: 3 (see sequence alignment result, Cole et al., PIR\_76, Accession NO: D70672, July 17, 1998). This reads on claim 19, which has an isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19, wherein said peptide is less than one-hundred amino acids in length (claim 19); on claim 28, which has an isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18 and 19; on claim 30, which has an isolated polypeptide comprising the amino acid sequence of SEQ ID NO: 3. The peptide of Cole et al. reference has 84 amino acid residues, which is less than one-hundred amino acid residues (claim 19), thus anticipating claims 19, 28, and 30 of instant application.

With respect to claims 19, 28 and 30, Applicants respectfully traverse the aforementioned rejection. However, in the interest of expediting prosecution and in no way acquiescing to the Examiner's rejection, Applicants have amended the pending claims, thereby rendering the foregoing rejection moot. Specifically, claims 19 and 28 have been amended to delete SEQ ID NO: 3 and claim 30 has been cancelled. Accordingly, Applicants respectfully request that this 35 U.S.C. §102(b) rejection be reconsidered and withdrawn as it pertains to the foregoing claims.

With respect to new claim 47, Applicants respectfully submit that the aforementioned rejection does not apply. For a prior art reference, in terms of 35 U.S.C. § 102, to anticipate a claimed invention, the prior art must teach *each and every element* of the claimed invention. Lewmar Marine v. Barient, 827 F.2d. 744, 3 USPQ2d 1766 (Fed. Cir. 1987).

Claim 47 is directed to an isolated peptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16 and 17, 18 and 19, *wherein said peptide is a human peptide*. Cole *et al.* teach an uracil-DNA glycosylase protein, Rv2975c from the *Mycobacterium tuberculosis*, H37Rv strain. Thus, Cole *et al.* do not teach or suggest each and every element of new claim 47. Accordingly, Applicants respectfully submit that this 35 U.S.C. §102(b) rejection does not apply to claim 47.

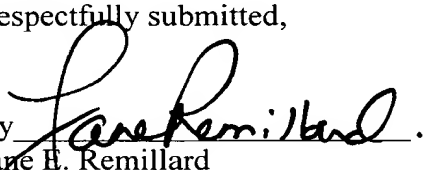
#### SUMMARY

In view of the above amendments and remarks, Applicants believe that the pending application is in condition for allowance.

Applicants believe that no fee is due with this statement. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. YAI-001 from which the undersigned is authorized to draw.

Dated: August 25, 2004

Respectfully submitted,

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